(a) performing a nucleic acid amplification reaction of the target nucleic acid in a test solution containing a forward primer and a reverse primer, a substrate comprising nucleotides, a nucleic acid polymerase and a target nucleic acid molecule, wherein the number of one of the forward primer and the reverse primer is lower than that of the other primer, and the primer present in a lower number is labeled with a marker molecule capable of generating a detectable signal;

(b) measuring a signal from the marker molecule in the test solution after initiation of the nucleic acid amplification reaction;

(c) evaluating a fluctuation motion of the amplified nucleic acid which is labeled with the marker molecule, in the test solution on the basis of the signal detected; and

(d) quantifying the target nucleic acid molecule on the basis of evaluation results.

2. (Twice Amended) A method according to claim 1, wherein the measurement step includes a step of measuring an amount of the marker molecule present in a predetermined micro detection field, said marker molecule being the primer attached to the target nucleic acid.

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5. (Twice Amended) A method according to claim 4, wherein the step of converting includes a step of performing an arithmetic operation by an autocorrelation function.

SUB H3

7. (Twice Amended) A method according to any one of claims 1 to 5, wherein the quantifying of the target nucleic acid molecule includes determining the presence and absence of the marker molecule of the primer attached to the target nucleic acid and incorporated into products of the nucleic acid amplification reaction on the basis of the evaluation results.

G4

8. (Twice Amended) The method according to any one of claims 1 to 5, wherein the quantifying of the target nucleic acid molecule includes determining the number of the labeled primer attached to the target nucleic acid and incorporated into products of the nucleic acid amplification reaction on the basis of the evaluation results.

G5

39. (Amended) A method according to any one of claims 1 to 5, wherein the number of labeled primer molecules is known.

42. (Amended) A method according to claim 1, wherein the mixing ratio of the forward primer and the reverse primer is in a range of 2:1 to 20:1.

43. (Amended) A method according to claim 42, wherein the mixing ratio of the forward primer and the reverse primer is in a range of 800nM:400nM to 800nM:40nM.

Please cancel claims 6, 40 and 41, without prejudice.